10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HAVCR2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19990c

Product Information

Application	WB, E
Primary Accession	Q8TDQ0
Other Accession	NP_116171.3
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41963
Calculated MW	33394
Antigen Region	167-194

Additional Information

Gene ID	84868
Other Names	Hepatitis A virus cellular receptor 2, HAVcr-2, T-cell immunoglobulin and mucin domain-containing protein 3, TIMD-3, T-cell immunoglobulin mucin receptor 3, TIM-3, T-cell membrane protein 3, HAVCR2, TIM3, TIMD3
Target/Specificity	This HAVCR2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 167-194 amino acids from the Central region of human HAVCR2.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HAVCR2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HAVCR2
Synonyms	TIM3, TIMD3

Function	Cell surface receptor implicated in modulating innate and adaptive immune responses. Generally accepted to have an inhibiting function. Reports on stimulating functions suggest that the activity may be influenced by the cellular context and/or the respective ligand (PubMed:24825777). Regulates macrophage activation (PubMed:11823861). Inhibits T-helper type 1 lymphocyte (Th1)-mediated auto- and alloimmune responses and promotes immunological tolerance (PubMed:14556005). In CD8+ cells attenuates TCR-induced signaling, specifically by blocking NF-kappaB and NFAT promoter activities resulting in the loss of IL-2 secretion. The function may implicate its association with LCK proposed to impair phosphorylation of TCR subunits, and/or LGALS9-dependent recruitment of PTPRC to the immunological synapse (PubMed:24337741, PubMed:26492563). In contrast, shown to activate TCR-induced signaling in T-cells probably implicating ZAP70, LCP2, LCK and FYN (By similarity). Expressed on Treg cells can inhibit Th17 cell responses (PubMed:24838857). Receptor for LGALS9 (PubMed:16286920, PubMed:24337741). Binding to LGALS9 is believed to result in suppression of T-cell responses; the resulting apoptosis of antigen- specific cells may implicate HAVCR2 phosphorylation and disruption of its association with BAG6. Binding to LGALS9 is proposed to be involved in innate immune response to intracellular pathogens. Expressed on Th1 cells interacts with LGALS9 expressed on Mycobacterium tuberculosis- infected macrophages to stimulate antibactericidal activity including IL-1 beta secretion and to restrict intracellular bacterial growth (By similarity). However, the function as receptor for LGALS9 has been challenged (PubMed:23555261). Also reported to enhance CD8+ T-cell responses to an acute infection such as by Listeria monocytogenes (By similarity). Receptor for phosphatidylserine (PtSer); PtSer-binding is calcium-dependent. May recognize PtSer on apoptotic cells leading to their phagocytosis. Mediates the engulfment of apoptotic cells by dendritic cells. Expressed on T-cells, promotes conjugation but not engulfment of apoptotic cells. Expressed on dendritic cells (DCs) positively regulates innate immune response and in synergy with Toll- like receptors promotes secretion of TNF. In tumor-infiltrating DCs suppresses nucleic acid-mediated innate immune repsonse by interaction with HMGB1 and interfering with nucleic acid-sensing and trafficking of nucleid acids to endosomes (By similarity). Expressed on natural killer (NK) cells and acts as a coreceptor to enhance IFN-gamma production in response to LGALS9 (PubMed:22323453). In contrast, shown to suppress NK cell-mediated cytotoxicity (PubMed:22383801). Negatively regulates NK cell function in LPS-induced endotoxic shock (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell junction. Cell membrane. Note=Localizes to the immunological synapse between CD8+ T-cells and target cells
Tissue Location	Expressed in T-helper type 1 (Th1) lymphocytes. Expressed on regulatory T (Treg) cells after TCR stimulation. Expressed in dendritic cells and natural killer (NK) cells. Expressed in epithelial tissues. Expression is increased on CD4+ and CD8+ T-cells in chronic hepatitis C virus (HCV) infection. In progressive HIV-1 infection, expression is up-regulated on HIV-1-specific CD8 T-cells

Background

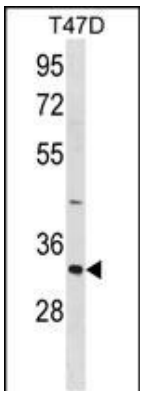
CD4 (MIM 186940)-positive T helper lymphocytes can be divided into types 1 (Th1) and 2 (Th2) on the basis of their cytokine secretion patterns. Th1 cells and their associated cytokines are involved in cell-mediated immunity to intracellular pathogens and delayed-type hypersensitivity reactions, whereas Th2 cells are involved in the control of extracellular helminthic infections and the promotion of atopic and allergic diseases. The 2 types of cells also cross-regulate the functions of the other. TIM3 is a Th1-specific cell surface protein that regulates macrophage activation and enhances the severity of experimental

autoimmune encephalomyelitis in mice.

References

Cao, B., et al. Cancer Immunol. Immunother. 59(12):1851-1857(2010)
Dorfman, D.M., et al. Hum. Pathol. 41(10):1486-1494(2010)
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Dardalhon, V., et al. J. Immunol. 185(3):1383-1392(2010)
Schuurhof, A., et al. Pediatr. Pulmonol. 45(6):608-613(2010)

Images



HAVCR2 Antibody (Center) (Cat. #AP19990c) western blot analysis in T47D cell line lysates (35ug/lane).This demonstrates the HAVCR2 antibody detected the HAVCR2 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.